

RAW SEQUENCE LISTING DATE: 04/03/2001  
 PATENT APPLICATION: US/09/803,719 TIME: 20:20:02

Input Set : A:\Pto.amc  
 Output Set: N:\CRF3\04032001\I803719.raw

4 <110> APPLICANT: Williams, Lewis T.  
 5 Escobedo, Jaime  
 6 Innis, Michael A.  
 7 Garcia, Pablo Dominguez  
 8 Sudduth-Klinger, Julie  
 9 Reinhard, Christoph  
 10 Giese, Klaus  
 11 Randazzo, Filippo  
 12 Kennedy, Giulia C.  
 13 Pot, David  
 14 Kassam, Altaf  
 15 Lamson, George  
 16 Drmanac, Radoje  
 17 Crkvenjakov, Radomir  
 18 Dickson, Mark  
 19 Drmanac, Snezana  
 20 Labat, Ivan  
 21 Leshkowitz, Dena  
 22 Kita, David  
 23 Garcia, Veronica  
 24 Jones, Lee William  
 25 Stache-Crain, Birgit  
 27 <120> TITLE OF INVENTION: Human Genes and Gene Products  
 30 <130> FILE REFERENCE: 1624.002  
 C--> 32 <140> CURRENT APPLICATION NUMBER: US/09/803,719  
 C--> 32 <141> CURRENT FILING DATE: 2001-03-09  
 32 <150> PRIOR APPLICATION NUMBER: 60/188,609  
 33 <151> PRIOR FILING DATE: 2000-03-09  
 35 <160> NUMBER OF SEQ ID NOS: 2396  
 37 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 39 <210> SEQ ID NO: 1  
 40 <211> LENGTH: 362  
 41 <212> TYPE: DNA  
 42 <213> ORGANISM: Homo sapiens  
 44 <220> FEATURE:  
 45 <221> NAME/KEY: misc\_feature  
 46 <222> LOCATION: (1)...(362)  
 47 <223> OTHER INFORMATION: n = A,T,C or G  
 49 <400> SEQUENCE: 1  
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 51 tctttctc tttctgtga ctggctcgag gtttagcatt tgtatccgca aaatggcttt 120  
 52 tgagtccctca cagacagtgg ctttgagaaa cctgctcttg gtgtccccac atgacacctat 180  
 53 tggtaaacct tagtgctgt aacagaaga caagcagata ctgtgtgcatt tccgacatga 240  
 54 ggcagtacaa agtacatagt atcacctagg aactagtctt gccaaaagca gaggggggca 300  
 W--> 55 gggggagaca gagagacaca nagagagaaa cagagaccgt gacagtgaga aatttaacct 360  
 W--> 56 an 362  
 58 <210> SEQ ID NO: 2

## RAW SEQUENCE LISTING

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Input Set : A:\Pto.amc

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59 <211> LENGTH: 273  
 60 <212> TYPE: DNA  
 61 <213> ORGANISM: Homo sapiens  
 63 <400> SEQUENCE: 2  
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 65 agccaatgtaa aaagcttggt ttatattgtt agataacaata ataataaataa ggtctttttta 120  
 66 gtaaattttat gcttaactat ccagcaacat ggtatgggtt atgtggccct taggaaaaata 180  
 67 cagattgatt ttgttgttaa gtttcatttt ctctttttta agtgcattttt ttggataact 240  
 68 gttaatagct acttagttgg gtattaaaga aag 273  
 70 <210> SEQ ID NO: 3  
 71 <211> LENGTH: 380  
 72 <212> TYPE: DNA  
 73 <213> ORGANISM: Homo sapiens  
 75 <400> SEQUENCE: 3  
 76 tacgggtcg agatgacgac agacgggcct ggctgatcac ctgcggccgc ttgattgaga 60  
 77 ccagcctgac ccttattttt aaaccgggc tatactattt ctacatattt aactgttctt 120  
 78 ggtggcacat gcctgtaata ccatctacta tgcaatggga ggctggataa tcacttgaac 180  
 79 ctgggaggcg aagggtgtgg tgagccgaga tcgcaccatt gcactccagc ctggcaaca 240  
 80 agagcgaaac tacgtctcat aaaaaaaaaaaa aaaaaaaaaaa tggggcccg ttttttgggt 300  
 81 attccccacca taaaaaaaaat cattgcaggg gtgggccaac cccactctaa ggtggcggtt 360  
 82 aaaaaaaaaactt ttttttggtc 380  
 84 <210> SEQ ID NO: 4  
 85 <211> LENGTH: 344  
 86 <212> TYPE: DNA  
 87 <213> ORGANISM: Homo sapiens  
 89 <400> SEQUENCE: 4  
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 91 gggaaatttaa catctacagg aaaagtagaa acacaattct tctaagggtt tatataactc 120  
 92 caactaaggc catctcttcc ttgcattaa ctccctgaaac gcctgtaatc ccagcaattt 180  
 93 gggaggccga ggcggccgga tcacgaggtc aggagatcga gaccatcccg gctaaaacgg 240  
 94 tgaaaccctg tctctactaa aaatacaaaa aactagccgg gcgttagtggc gggccctgt 300  
 95 agtcccagct acttgggagg ctgaggcagg agaatggcgt gaat 344  
 97 <210> SEQ ID NO: 5  
 98 <211> LENGTH: 317  
 99 <212> TYPE: DNA  
 100 <213> ORGANISM: Homo sapiens  
 102 <400> SEQUENCE: 5  
 103 tacgacagaa cggcaccatg ttggccacgc tggcttgaa agcctgaact caggtgattt 60  
 104 gcccgcctcg gcctccaaaa acgctggat taccgcgtg agccaccatg cctggccctg 120  
 105 tccatTTAG agccagcaag ccaatcacat ttcaaggcct ctggcccct tttgtaaat 180  
 106 aaatctctat acagggcagc gtttccaccc tctctccagc tcctagcagt tccatagcac 240  
 107 gcttcttaacc tgctgttaaca gagtgaggat ttccatgtcc ttatgcagt gatgaatgt 300  
 108 agggtgagtg agaacct 317  
 110 <210> SEQ ID NO: 6  
 111 <211> LENGTH: 345  
 112 <212> TYPE: DNA  
 113 <213> ORGANISM: Homo sapiens  
 115 <400> SEQUENCE: 6  
 116 agtgctggag aatcatgttag ttaatcccat tgctcttaca agtgcagct tacttgtatc 60

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117	agcctcccta	cgcaaggacc	tatgactgg	agccgttagga	ggctcttag	ttgggccccca	120
118	aggataaggc	tactgatttg	atactaaatg	aatcagcagt	ggatgttaggg	atagctgatt	180
119	ttaaaaacact	cggctgggca	cagtggtctca	cacctgtaat	cccagcactt	tggaggctg	240
120	aggcaggcag	atcatgatgt	caggagttt	agaccagcct	ggccaatatg	gtaaaaccct	300
121	gtctctacaa	aaaataaaaa	aattagctgg	gcatgtgggg	cgtgt		345
123	<210>	SEQ ID NO:	7				
124	<211>	LENGTH:	359				
125	<212>	TYPE:	DNA				
126	<213>	ORGANISM:	Homo sapiens				
128	<400>	SEQUENCE:	7				
129	cactgcaacc	tccgcctccc	aggttcatgc	cattctcctg	cctcagccctc	ccgagcagct	60
130	gggattcccg	gcacccacca	ccatcccag	cgacttttt	gtatTTTtag	tagagacagg	120
131	gtttcactgt	gttagccagg	atgttcttga	tctcctgacc	tcgtgtatcca	ccgcctcag	180
132	cctcccaaag	tgttgggatt	acaggcgtga	gccaccgcgc	ccggccgagc	agataggtt	240
133	tcaaagagct	gagcaaagat	tgttagcagtc	tcacagtaact	agggagataa	aggttaggaat	300
134	tcaggacttt	ccaggggtca	caggctttgg	taaatgcctc	acattatcag	ctaaaaacc	359
136	<210>	SEQ ID NO:	8				
137	<211>	LENGTH:	398				
138	<212>	TYPE:	DNA				
139	<213>	ORGANISM:	Homo sapiens				
141	<220>	FEATURE:					
142	<221>	NAME/KEY:	misc_feature				
143	<222>	LOCATION:	(1)...(398)				
144	<223>	OTHER INFORMATION:	n = A,T,C or G				
146	<400>	SEQUENCE:	8				
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W--> 148	ctagaggcat	gtaccacac	gcctgcctaa	tttttttgt	tttttagtag	agatggggnt	120
W--> 149	tnaccatatt	ggccaggctg	atcttgaact	cctgtcctcg	ggtgaactat	ctggcatgg	180
150	ctagttatgt	gacgtgcaca	catacttctt	tttgtatgaa	ttcttcagca	aaaatggggg	240
151	tacttgggct	gtgcgcffff	cgctcctctt	tataatgtct	tgtattttaga	aggaaggggc	300
152	tgcgttggcc	tcttcgaat	gtcgcgggta	taaattcgct	gaggagtgc	tgtgaccacc	360
153	cttctaacga	tttttctacg	tgttagctc	tccagctc			398
155	<210>	SEQ ID NO:	9				
156	<211>	LENGTH:	382				
157	<212>	TYPE:	DNA				
158	<213>	ORGANISM:	Homo sapiens				
160	<400>	SEQUENCE:	9				
161	agaggaggag	aatcggggac	acaagaagga	ggaggagatg	aagagggtaa	ggagaggagg	60
162	agaaaaggag	aagagaagga	ggaggagaaa	agaaaggagt	ggagaaagag	gagaggagg	120
163	aaaaaaatag	gaaacgaaga	ggagaagaat	aggaggagga	aaaggatggg	agaaaagaaa	180
164	aaggaaaagt	aggaggagta	aaaaaagagg	agaaggagga	agaagaaaaga	gaaggaggag	240
165	acaaaaagaa	tgaaaaaaag	aggaggagg	aatgaggaga	aggcgtataa	gataagaacg	300
166	aggagaggat	taagaaggag	aagttagagga	ggaggagaga	agaggaaagg	aggaggaaag	360
167	gagaatacaa	ggaggaagag	aa				382
169	<210>	SEQ ID NO:	10				
170	<211>	LENGTH:	326				
171	<212>	TYPE:	DNA				
172	<213>	ORGANISM:	Homo sapiens				
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175	ccaaaccagat	gttgaactgtc	atcactggga	ctcaactggg	aaaccctctt	tttcctccaa	60
176	atttgctgct	ctaggtgcta	agggtctgt	ggacagagct	ttgggactgt	tagaattcta	120
177	tcagaaaaaaa	acgagacaga	aggctataag	catgagtgt	ggcagggtgc	tgtggttcac	180
178	ttctgtatac	ccagcac	ttt gggaggccaa	gttagggagaa	tcccttgaag	ccaggaattc	240
179	aagaccaccc	tgggcaat	at agcaaacc	tgattctaca	aaaaattaaa	aagtatctg	300
180	agtgtgggt	cacacac	ctc tagtcc				326
182	<210>	SEQ ID NO:	11				
183	<211>	LENGTH:	286				
184	<212>	TYPE:	DNA				
185	<213>	ORGANISM:	Homo sapiens				
187	<220>	FEATURE:					
188	<221>	NAME/KEY:	misc_feature				
189	<222>	LOCATION:	(1)...(286)				
190	<223>	OTHER INFORMATION:	n = A,T,C or G				
192	<400>	SEQUENCE:	11				
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194	catgactat	cggaatctgg	atca	ctgtat	tgtaatcgg	ctgctgaata	120
W-->	195	gacgagtgt	atacctacaa	gcttatnact	tggaggctt	gctctttag	180
196	atcttttgg	ggtttagac	tata	gttcttct	ctgttttctt	tttttctt	240
197	atgaaaaaaa	aggaccttc	gtttagttt	gtgtggttat	ttatcg		286
199	<210>	SEQ ID NO:	12				
200	<211>	LENGTH:	325				
201	<212>	TYPE:	DNA				
202	<213>	ORGANISM:	Homo sapiens				
204	<400>	SEQUENCE:	12				
205	gcggtctgg	ctca	ctgac	ctgatgt	gcaactctac	agccat	60
206	tcccaagtag	ctgggattac	agcagcgcac	cattatac	ggctaattgt	tgaataatta	120
207	gaacgggagg	agatttgc	tagaaagt	ctaaaataaa	ggaaaagt	tgagccctaa	180
208	taaacaagta	gtgttttga	ctcagcatt	aaaaaaat	atgagctat	accaggagat	240
209	ctaagtttct	tttggtg	aatc	atgcaca	aaagttatct	gttcaataag	300
210	atgg	tccata	tctcatat	actag			325
212	<210>	SEQ ID NO:	13				
213	<211>	LENGTH:	320				
214	<212>	TYPE:	DNA				
215	<213>	ORGANISM:	Homo sapiens				
217	<400>	SEQUENCE:	13				
218	agcctcctg	ta	ctataggcgc	ccggcaccac	accggctaa	ttttttgt	60
219	tttttagtag	agacggcgtt	tcac	ctgtt	agccaggat	gccttgc	120
220	tgttccgt	gccttggc	c	ccaaagtgc	tgttattacc	agcgtgagcc	180
221	gcca	ctagcg	gcattt	aaagagat	tggcgccgtc	tctcgat	240
222	aac	ttgcgc	gtgacc	ctgatc	ttt	tttgc	300
223	tgctt	caca	agg	tttgc	ttt	tttgc	320
225	<210>	SEQ ID NO:	14				
226	<211>	LENGTH:	353				
227	<212>	TYPE:	DNA				
228	<213>	ORGANISM:	Homo sapiens				
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232	cccgggctat	actatagata	caaa	aggtagc	tggcgtgg	ggcacat	120

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233	tctactatgg	agggagaggc	tggataatca	cttgaacctg	gtagggaaag	gttgtggta	180	
234	gccgagatcg	caccattgca	ctccagcctg	gcacaacaaga	gcgaaaactac	gtctcacaaa	240	
235	aaaaaaaaaa	aaaatcttg	ggccgggttt	ttaaatgaac	tcgacatgga	agcacacact	300	
236	ttaggcttg	ggcacacccc	aaagctttag	cgccgggaaa	aaattgtttt	ttg	353	
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239	<211>	LENGTH:	349					
240	<212>	TYPE:	DNA					
241	<213>	ORGANISM:	Homo sapiens					
243	<400>	SEQUENCE:	15					
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245	aattggcttc	attatttggg	ccaccactt	tatatacata	ctgggtttga	ggcagcaac	120	
246	cagcattctt	ggctaagata	aatgaggctg	gacagtag	cttatgcctg	taatcccagg	180	
247	acttgggag	gcctagggtgg	gaggatact	tgagcttagg	agttctagac	tagcttaggc	240	
248	aacatagcaa	gaccctaact	ctaaaacaat	ttttttttt	tttttttggg	gaagagtttc	300	
249	acttttttgg	cccaagctga	gaggacgct	gccacccgg	ggattcctg		349	
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252	<211>	LENGTH:	405					
253	<212>	TYPE:	DNA					
254	<213>	ORGANISM:	Homo sapiens					
256	<220>	FEATURE:						
257	<221>	NAME/KEY:	misc_feature					
258	<222>	LOCATION:	(1)...(405)					
259	<223>	OTHER INFORMATION:	n = A,T,C or G					
261	<400>	SEQUENCE:	16					
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263	aattacctct	tatataaaagc	ttctgtctaat	ccctccattt	cccagcccc	gaggggactg	120	
264	tttttccaa	aggggactt	tttctgaacc	cccataatgt	tttatgcctc	ttatatggag	180	
265	tttatataat	tttgcatgt	attgaaatca	tttagttaat	tgtcttatct	tcattgctag	240	
266	agtgtaaagct	ctttaaggta	aagacagtgt	tattcagtt	attatctccc	caaataccta	300	
W-->	267	ntatacgatc	ttaggcctat	ctagtagata	ctcaaaaaat	atataccta	ataaatgtga	360
	268	ttaagctatc	acatttatgt	cctatggtag	gcactaaatc	aaggt	405	
	270	<210>	SEQ ID NO:	17				
	271	<211>	LENGTH:	307				
	272	<212>	TYPE:	DNA				
	273	<213>	ORGANISM:	Homo sapiens				
	275	<400>	SEQUENCE:	17				
	276	gcagtggcat	gatctcagct	caactgcaacc	tccgcctccc	agttcatgc	catttcctg	60
	277	cctcagcctt	ccgagtagt	gggactacag	gtcccgaca	ccatgcccag	ctaattctct	120
	278	ggattgtatag	tatagacggg	tttttattgt	ttttttccac	attttctt	tttagtattgc	180
	279	ctatatttcc	tcggcatctt	gtacctaata	gtgtgcgtt	aaaaaaatgc	ctggcaacat	240
	280	atatacgctt	ttttatttt	atgactttagaa	aaaaaaaaagg	tgggactccc	aatttgttct	300
	281	cgcacct						307
	283	<210>	SEQ ID NO:	18				
	284	<211>	LENGTH:	138				
	285	<212>	TYPE:	DNA				
	286	<213>	ORGANISM:	Homo sapiens				
	288	<400>	SEQUENCE:	18				
	289	acagttttaa	acaacaggaa	gttttcattc	ccttcctggg	tgtcttgggt	catctgggcc	60
	290	ctgatggtgg	agccatgcca	gatagaggga	ttatgtatgt	taaatctagt	aggattactg	120

FYI

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields for each sequence which presents at least one n or Xaa.

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L:32 M:270 C: Current Application Number differs, Replaced Current Application No  
L:32 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:55 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8  
L:195 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16  
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:349 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22  
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
L:467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31  
L:557 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37  
L:573 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38  
L:608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40  
L:650 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43  
L:683 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45  
L:701 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46  
L:758 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50  
L:783 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52  
L:812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54  
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59  
L:953 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64  
L:1053 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72  
L:1189 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82  
L:1217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84  
L:1219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84  
L:1237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85  
L:1251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86  
L:1273 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87  
L:1334 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91  
L:1487 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102  
L:1500 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:1507 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:1537 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105  
L:1556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106  
L:1572 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107  
L:1588 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108  
L:1639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1701 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115  
L:1719 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116  
L:1736 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117  
L:1814 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122  
L:1833 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123  
L:1934 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130  
L:1935 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130  
L:1936 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:130  
L:1952 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:131

VERIFICATION SUMMARY

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L:1971 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:132

L:2071 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:139

L:2104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:141

L:2191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:147